Anirudh Sunil

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Education

University of Illinois - Urbana Champaign **May 2027**
B.S., Mathematics and Computer Science
- **Coursework:** CS 233 (Computer Architecture), CS 225 (Data Structures), Math 416 (Abstract Linear Algebra), Math 213 (Discrete Mathematics), CS 374 (Algorithms) , CS 374 (Algorithms) , Math 412 (Graph Theory), CS 361 (Probability and Statistics in Computer Science)

Skills

- **Programming Languages**: C++, Java, Pascal, HTML, CSS, Python
- **Tools And Frameworks**: Kubernetes, AWS, SQL, Burp Suite, OWASP ZAP, DirBuster, NodeJS

Work Experience

Trydan Tech | *Software and Systems Development Intern* **Jun 2024 - Jul 2024**
- Leveraged CAN communication protocols in Python using cantools modules to collect data for the EV scooter division XSTRAD, ensuring accurate testing with Synchronous Reluctance motor via Raspberry Pi's SPI interface and 2CH CAN FD HAT
- Decoded bits from a DBC file and organized data in a CSV format to facilitate effective analysis and identification of correlations among parameters such as speed, temperature, and phase current
- Collaborated with peers to analyze 10,000 data points across 26 motor variables, improving code review and quality assurance practices through detailed analysis and teamwork

Chad Rienstra Lab | *Undergraduate Researcher* **Aug 2023 - Dec 2023**
- Tested protein structure models using zero normalized cross-correlation scores, which improved the accuracy of the BPHON paper's findings by identifying and resolving model discrepancies
- Developed and executed Python and Bash scripts to validate computational analysis techniques across 5,000 files and 5 directories, reflecting proficiency in object-oriented programming and systematic software testing
- Optimized the analysis pipeline for large-scale datasets of simulated and experimental SSNMR protein data, reducing processing time and improving data accuracy
- Collaborated with postdoctoral students at UW-Madison to enhance structure calculations, demonstrating effective communication and teamwork that are critical in agile software development environments

Prancer Enterprises | *Software Engineer Intern - Cloud Security* **Jun 2022 - Aug 2022**
- Debugged Amazon Web Services S3 buckets and permissions to organize configuration layout, improving data access efficiency
- Reconfigured Kubernetes pods to optimize resource allocation, enhancing the performance of pod clusters, containers, and nodes
- Established secure connections to regulate SQL databases, successfully preventing injection attacks and ensuring data integrity
- Utilized Shift Left Security tools such as Burp Suite proxy, OWASP ZAP, and DirBuster to secure websites, reducing vulnerabilities and enhancing security posture
- Enhanced knowledge of infrastructure, cloud offerings, and DevOps as code concepts, contributing to more effective cloud security solutions

Projects

Medicina.ai **Jan 2025**
- Designed web app with Python and Flask to update heart disease risk using linear regression on user input data
- Stores data in SQL database for login data and local user data and continuously updates visual chart to display user risk for diabetes and heart disease
- Implemented LLM chatbot feature using Gemini API for real-time communication with user

PoseMind AI: Contextual Yoga Recommender **Mar 2025**
- Developed a contextual Yoga Pose recommender app using Firestore, Vector Search, Langchain, and Gemini to deliver personalized pose suggestions based on user input.
- Implemented vector search and AI-generated embeddings to enable natural language querying and efficient retrieval of yoga pose recommendations.
- Designed and deployed a user-friendly web application with AI capabilities, integrating text, images, and audio for an enhanced user experience.

Certifications

- **Intermediate Technical Interview Prep - TIP102**: CodePath
- **Cybersecurity - CY102**: CodePath
- **AI4ALL Ignite Summer 2025**